

1 **CLAIMS**

2 What is claimed is:

- 3 1. A method comprising:
- 4 generating from a vehicle-based network server a browsable network
- 5 document including vehicle system data from one or more vehicle systems;
- 6 providing the browsable network document over a network to enable
- 7 remote viewing of the vehicle system data.
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- 10 2. A method as recited in claim 1 further comprising collecting vehicle
- 11 system data from one or more independent vehicle systems in a vehicle, each of
- 12 the independent vehicle systems generating a distinct type of vehicle system data.
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- 15 3. A method as recited in claim 1 further comprising transmitting the
- 16 network document over a network.
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- 18 4. A method as recited in claim 1 further comprising receiving a
- 19 network request for the vehicle system data.
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- 22 5. A method as recited in claim 1 further comprising relating vehicle
- 23 system data from a first independent vehicle system to vehicle system data from a
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1 second independent vehicle system, each of the first independent vehicle system
2 and the second independent vehicle system generating distinct vehicle system data.
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4 6. A method as recited in claim 1 further comprising displaying a web
5 page based on the browsable network document.
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8 7. A method as recited in claim 1 wherein the generating step
9 comprises generating a network document having an embedded object.
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11 8. A method as recited in claim 1 wherein the generating step
12 comprises populating a mark-up language document with the vehicle system data.
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15 9. A method as recited in claim 1 wherein the generating step
16 comprises creating an active server pages web page.
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18 10. A method as recited in claim 2 wherein the collecting operation
19 comprises gathering vehicle system data from at least one of an on-board
20 diagnostic (OBD) system, a global positioning system (GPS), a vehicle video
21 system, a vehicle security system, and an obstacle detection system.
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1 11. A method as recited in claim 10 further comprising using the OBD
2 system data and the GPS data to generate a map including a mark at a geographic
3 location where an OBD event occurred.
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5 12. A method as recited in claim 1 further comprising receiving vehicle
6 system configuration information to configure one or more of the vehicle systems.
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8 13. A method as recited in claim 12 wherein the receiving operation
9 comprises receiving at least one of vehicle user profile data, media data, vehicle
10 diagnostics data, map data, and geographic information system data.
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12 14. A method as recited in claim 12 wherein the receiving operation
13 comprises receiving the vehicle system configuration information from a remote
14 client.
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17 15. A method as recited in claim 2 further comprising storing the vehicle
18 system data in a relational database.
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1 16. A method comprising:
2 generating a user interface from a vehicle-based server, the user interface
3 enabling a client to access data in the vehicle-based server; and
4 transmitting the user interface from the vehicle-based server over a network
5 to the client.

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8 17. A method as recited in claim 16 further comprising receiving a
9 request for vehicle system data from the client.

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11 18. A method as recited in claim 16 further comprising receiving vehicle
12 system configuration data from the client.

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15 19. A method as recited in claim 16 further comprising collecting
16 vehicle system data from a plurality of vehicle systems.

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18 20. A method as recited in claim 16 further comprising storing a
19 plurality of vehicle system data in a relational database in the vehicle-based server.

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22 21. A method as recited in claim 16 further comprising:
23 collecting vehicle system data from two or more independent vehicle
24 systems;

1 generating a web page including the vehicle system data; and

2 transmitting the web page from the vehicle-based server.

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4 22. A method as recited in claim 21 wherein the transmitting operation
5 comprises transmitting the web page according to a hypertext transport protocol
6 (HTTP).
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1 23. A computer-readable medium having stored thereon computer-
2 executable instructions for performing a computer process comprising:

3 collecting vehicle system data from two or more vehicle systems in a
4 vehicle;

5 generating a web page including the vehicle system data from a vehicle-
6 based web server.
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9 24. A computer-readable medium as recited in claim 23, the process
10 further comprising transmitting the browsable network document over a network.
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12 25. A computer-readable medium as recited in claim 23, the process
13 further comprising receiving a network request for a subset of the vehicle system
14 data.
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17 26. A computer-readable medium as recited in claim 23, the process
18 further comprising relating vehicle system data from a first independent vehicle
19 system to vehicle system data from a second independent vehicle system.
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22 27. A computer-readable medium as recited in claim 23 wherein the
23 generating operation comprises creating a hypertext markup language (HTML)
24 document.
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2 28. A computer-readable medium as recited in claim 23 wherein the
3 generating step comprises generating a web page having an embedded object.
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5 29. A computer-readable medium as recited in claim 23 wherein the
6 generating step comprises creating an active server pages (ASP) web page.
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9 30. A computer-readable medium as recited in claim 23 wherein the
10 collecting operation comprises retrieving vehicle system data from at least one of
11 an on-board diagnostic (OBD) system, a global positioning system (GPS), a
12 vehicle video system, a vehicle security system, and an obstacle detection system.
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15 31. A computer-readable medium as recited in claim 30, the process
16 further comprising using the OBD system data and the GPS data to generate a map
17 including a mark at a geographic location on the map where an OBD event
18 occurred.
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20 32. A computer-readable medium as recited in claim 23, the process
21 further comprising receiving by the vehicle-based server, vehicle system
22 configuration information to configure a vehicle system.
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1 33. A computer-readable medium as recited in claim 32 wherein the
2 receiving operation comprises receiving at least one of vehicle user profile data,
3 media data, map data, and Geographic Information System (GIS) data.

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5 34. A computer-readable medium as recited in claim 23 wherein the
6 collecting operation comprises storing the vehicle system data in a relational
7 database.
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1 35. A vehicle comprising:
2 a web server operable to gather vehicle system data from one or more
3 independent vehicle systems in the vehicle and generate a browsable network
4 document including the vehicle system data.
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6 36. A vehicle as recited in claim 35, wherein the web server comprises a
7 network transmitter transmitting the browsable network document over a network.
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10 37. A vehicle as recited in claim 35, wherein the web server comprises a
11 network receiver receiving a network request for a subset of the vehicle system
12 data.
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15 38. A vehicle as recited in claim 35, wherein the web server comprises
16 processor-executable code that cause a processor to relate vehicle system data from
17 a first vehicle system to vehicle system data from a second vehicle system.
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19 39. A vehicle as recited in claim 35, wherein the browsable network
20 document comprises a hypertext markup language document.
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23 40. A vehicle as recited in claim 35, wherein the browsable network
24 document includes an embedded object.
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1 41. A vehicle as recited in claim 35 further comprising two or more of:
2 an on-board diagnostics (OBD) system;
3 a global positioning system (GPS);
4 a vehicle video source;
5 a vehicle security system; and
6 an obstacle detection system, wherein the OBD system, the GPS system, the
7 vehicle video source, the vehicle security system, and the obstacle detection system
8 are in communication with the web server.
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11 42. A vehicle as recited in claim 35 further comprising a relational
12 database storing data from the OBD system, the GPS system, the vehicle video
13 source, the vehicle security system, and the obstacle detection system.
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16 43. A vehicle as recited in claim 35, the web server further operable to
17 configure one or more of the vehicle systems using vehicle system configuration
18 data received from a remote client.
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21 44. A vehicle as recited in claim 35, wherein the web server further
22 comprises an encryption module operable to encrypt the browsable network
23 document.
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1 45. A vehicle-based system comprising:
2 a plurality of vehicle system interfaces collecting vehicle system data from
3 two or more vehicle systems in a vehicle;
4 a web server generating a web page including the vehicle system data from
5 plurality of vehicle system interfaces.
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8 46. A vehicle-based system as recited in claim 45 further comprising a
9 network transmitter transmitting the web page over a network according to a
10 network protocol.
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12 47. A vehicle-based system as recited in claim 45 further comprising a
13 network receiver receiving a network request for a subset of the vehicle system
14 data.
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17 48. A vehicle-based system as recited in claim 45 further comprising a
18 vehicle data management module relating vehicle system data from a first
19 independent vehicle system to vehicle system data from a second independent
20 vehicle system.
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23 49. A vehicle-based system as recited in claim 45 wherein the web page
24 comprises a hypertext markup language (HTML) document.
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2 50. A vehicle-based system as recited in claim 45 wherein the web page
3 includes an embedded object.
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5 51. A vehicle-based system as recited in claim 45 wherein the web page
6 comprises an active server pages (ASP) web page.
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8 52. A vehicle-based system as recited in claim 45 wherein the plurality
9 of vehicle system interfaces comprise at least one of an on-board diagnostic (OBD)
10 system, a global positioning system (GPS), a vehicle video system, a vehicle
11 security system, and an obstacle detection system.
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13 53. A vehicle-based system as recited in claim 45 further comprising a
14 relational database operable to create relations among vehicle system data from the
15 plurality of vehicle system interfaces.
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1 54. A vehicle-based computer-readable memory having a vehicle system
2 data structure, the data structure comprising:
3 an on-board diagnostics (OBD) code field containing an OBD code logged
4 during vehicle operation;
5 a vehicle location field containing data representing the vehicle location;
6 and
7 a timestamp field containing data representing the time of the vehicle
8 location and the OBD code, wherein the timestamp enables a computer to display
9 an OBD symbol and the vehicle location on a web-browsable map.
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1 55. A vehicle-based computer comprising:
2 a plurality of vehicle system interfaces receiving vehicle system data from a
3 plurality of independent vehicle systems in a vehicle; and
4 means for generating a web page including vehicle system data from at least
5 one of the plurality of independent vehicle systems in the vehicle.
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8 56. A vehicle-based computer as recited in claim 55 wherein the means
9 for generating comprises a vehicle-based web server.
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11 57. A vehicle-based computer as recited in claim 55 wherein the means
12 for generating comprises:
13 a vehicle-based web server; and
14 a runtime engine in communication with the server and operable to generate
15 the web page.
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